

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
21 February 2002 (21.02.2002)

PCT

(10) International Publication Number
WO 02/15510 A3

(51) International Patent Classification⁷: H04L 29/06,
H04Q 7/22

(21) International Application Number: PCT/IB01/01757

(22) International Filing Date: 17 August 2001 (17.08.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0020442.0 18 August 2000 (18.08.2000) GB

(71) Applicant (for all designated States except US): NOKIA
NETWORKS OY [FI/FI]; Keilalahdentie 4, FIN-02150
Espoo (FI).

(72) Inventors; and

(75) Inventors/Applicants (for US only): LEPPANEN, Sari
[FI/FI]; Nokia Networks Oy, Keilalahdentie 4, FIN-02150
Espoo (FI). SARKKINEN, Sinikka [FI/FI]; Nokia Net-
works Oy, Keilalahdentie 4, FIN-02150 Espoo (FI). TOU-
RUNEN, Ari [FI/FI]; Nokia Networks Oy, Keilalahdentie
4, FIN-02150 Espoo (FI).

(74) Agents: SLINGSBY, Philip, Roy et al.; Page White &
Farrer, 54 Doughty Street, London WC1N 2LS (GB).

(81) Designated States (national): AE. AG. AL. AM. AT. AU.
AZ. BA. BB. BG. BR. BY. BZ. CA. CH. CN. CO. CR. CU.
CZ. DE. DK. DM. DZ. EE. ES. FI. GB. GD. GE. GH. GM.
HR. HU. ID. IL. IN. IS. JP. KE. KG. KP. KR. KZ. LC. LK.
LR. LS. LT. LU. LV. MA. MD. MG. MK. MN. MW. MX.
MZ. NO. NZ. PL. PT. RO. RU. SD. SE. SG. SI. SK. SL.
TJ. TM. TR. TT. TZ. UA. UG. US. UZ. VN. YU. ZA. ZW.

(84) Designated States (regional): ARIPO patent (GH. GM.
KE. LS. MW. MZ. SD. SL. SZ. TZ. UG. ZW), Eurasian
patent (AM. AZ. BY. KG. KZ. MD. RU. TJ. TM), European
patent (AT. BE. CH. CY. DE. DK. ES. FI. FR. GB. GR. IE.
IT. LU. MC. NL. PT. SE. TR), OAPI patent (BF. BJ. CF.
CG. CI. CM. GA. GN. GQ. GW. ML. MR. NE. SN. TD.
TG).

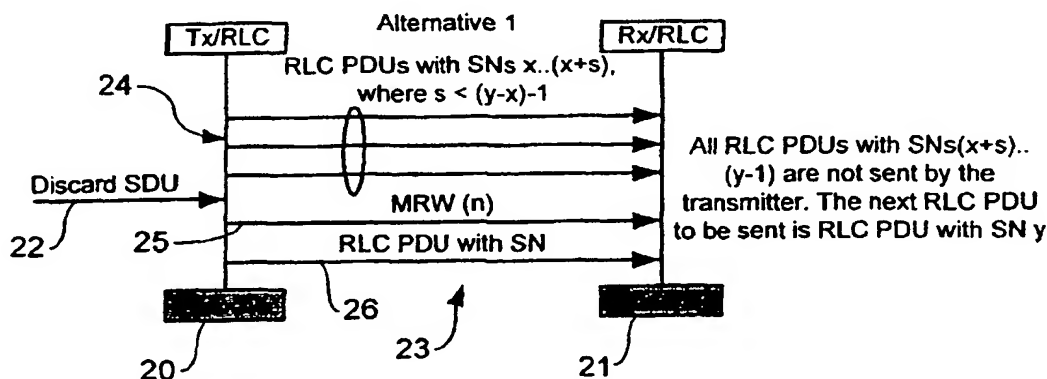
Published:

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

(88) Date of publication of the international search report:
10 May 2002

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: DATA TRANSMISSION PROTOCOL



(57) Abstract: A method of transmitting data from a transmitter towards a receiver, comprising the steps of: forming a plurality of ordered data units each comprising a part of a data message; transmitting at least some of the data units in order; identifying a discard status in respect of the data message; and if a subset of the data units including the final one of the data units and at least one other of the data units has not been transmitted: indicating that the data message is to be discarded and specifying the identify of the final one of the data units; and transmitting only the final one of the data units from the said subset.

BEST AVAILABLE COPY

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB 01/01757

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04L29/06 H04Q7/22

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04L H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	"Universal Mobile Telecommunications System (UMTS) RLC Protocol Specification (3G TS 25.322 version 3.3.0 Release 1999)" ETSI TS 125 322 V3.3.0, June 2000 (2000-06), XP002902276 chapter 11.2, 11.6 ---	1-24
X	"Universal Mobile Telecommunications System (UMTS); Radio Link Control (RLC) Protocol Specification (3GPP TS 25.322 version 4.3.0 Release 4)" ETSI TS 125 322 V4.3.0, December 2001 (2001-12), XP002902277 chapter 11.2, 11.6 --- -/--	1-24

☒ Further documents are listed in the continuation of box C.

☐ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

4 February 2002

Date of mailing of the international search report

01.03.2002

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Anders Edlund

BEST AVAILABLE COPY

INTERNATIONAL SEARCH REPORT

International Application No

JT/IB 01/01757

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
<p>1</p> <p>A</p>	<p>"TSG-RAN Working Group 2 (Radio layer 2 and Radio layer 3)" TSGR2//4(99)407, 25 - 28 May 1999, XP002902278 Berlin the whole document -----</p>	<p>1-24</p>
<p>2</p>		